

ABSTRACT OF THE DISCLOSURE

A door suspension assembly includes a ferromagnetic flat plate horizontally extending from a support rail adapted to be attached to a door frame above a doorway or entrance portal. Two supporting blocks each have an opening in which a cylindrical bearing with an axial hole is located. The supporting blocks are attached to a door panel. 5 Connectors extend downwardly from the flat plate and support a tube that extends through the holes in the bearings. A magnet array is supported by an upper plate attached to upper ends of the supporting blocks with a small magnetic gap between the magnet array and the flat plate such that the magnet array generates a magnetic force 10 lifting the supporting blocks and the door panel. A primary of a linear motor is attached to the upper plate between the supporting blocks and cooperates with a secondary located in the interior of the tube to move the door panel relative to the flat plate.

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